#### (12) INTERNATIONAL TYPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 5 February 2004 (05.02.2004)

PCT

### (10) International Publication Number WO 2004/010898 A1

(51) International Patent Classification7: A61B 17/11

A61F 2/06 //

(74) Agent: ONSAGERS AS; P.O. Box 6963 St. Olavs plass, N-0130 Oslo (NO).

(21) International Application Number:

PCT/NO2003/000258

(22) International Filing Date:

25 July 2003 (25.07.2003)

(25) Filing Language:

Norwegian

(26) Publication Language:

English

(30) Priority Data: 20023605

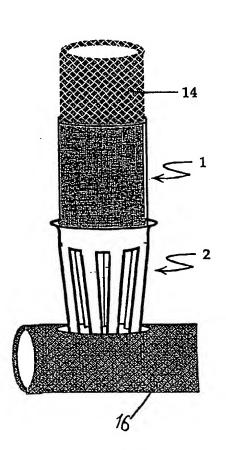
29 July 2002 (29.07.2002)

(71) Applicants and

- (72) Inventors: ROY Sumit [IN/NO]; Industrigata 71A, N-0357 Oslo (NO) FOSSE, Erik [NO/NO]; Maridalsveien 71B, N-0458 Oslo (NO) ELLE, Ole, Jakob [NO/NO]; Jolly Kramer-Johansensgt. 8, N-0475 Oslo (NO).
- (81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE
  - (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

[Continued on next page]

#### (54) Title: METHOD AND DEVICE FOR INTERCONNECTION OF TWO TUBULAR ORGANS



(57) Abstract: A method for interconnection of two tubular organs (14, 16) via an opening at one end (8) of an end portion (15) of a first organ (14) and an aperture (17) in a side wall of a second organ (16). According to the invention the end portion (15) is initially passed through a first passage (32) of a first element (1) until the end portion (15) projects past an end edge (4) of the element (1), whereupon the end portion (15) is everted round the end edge (4). Gripping parts (12) of a second element (2) with a second passage (34) are then inserted in the second organ (16) via the aperture (17). Finally, the first element (1) with the everted portion (15) of the first organ is inserted in the second passage (34), whereby the gripping parts (12) are influenced in such a manner that they come into engagement with the inside of an edge portion (39) of the aperture (17). A device for implementation of the method.

SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Declaration under Rule 4.17:

 as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

### A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A61F 2/06 // A61B 17/11
According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

#### IPC7: A61B, A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

### SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## EPODOC INTERNAL, MEDLINE

#### C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0723766 A1 (CORDIS EUROPA N.V.), 31 July 1996 (31.07.96)	7-19
	<del></del>	
A	WO 0027311 A1 (ST. JUDE MEDICAL CARDIOVASCULAR GROUP, INC.), 18 May 2000 (18.05.00), figures 26-31	7-19
A	WO 0134037 A1 (ONUX MEDICAL, INC.), 17 May 2001 (17.05.01), figures 4a-41, abstract	7-19
A	WO 0170090 A2 (BY-PASS, INC.), 27 Sept 2001 (27.09.01), figure 5c, abstract	7-19
	1	

X	Further documents are listed in the continuation of Box	X See patent family annex.		
*	Special categories of cited documents:	"T"	later document published after the international filing date or priority	
"A"	document defining the general state of the art which is not considered to be of particular relevance		date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
"B"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive	
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other		step when the document is taken alone	
	special reason (as specified)	"Y"	document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is	
"O"	document referring to an oral disclosure, use, exhibition or other means		combined with one or more other such documents, such combination being obvious to a person skilled in the art	
*P*	document published prior to the international filing date but later than the priority date claimed	<b>"&amp;</b> "	document member of the same patent family	
Dat	e of the actual completion of the international search	Date of mailing of the international search report		
24 Octobro 2002			<b>3 0</b> -10- 2003	
	October 2003	<del> </del>		
Nar	ne and mailing address of the ISA/	Authorized officer		

Leif Brander/Els

Telephone No. +46 8 782 25 00

Form PCT/ISA/210 (second sheet) (July 1998)

Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Swedish Patent Office



C (Continu	ation). DOCUMENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2737653 A1 (B BRAUN CELSA SOCIETE ANONYME), 14 February 1997 (14.02.97)	7-19
A	 US 5366462 A (ROBERT L. KASTER ET AL), 22 November 1994 (22.11.94), figures 10-19	7-19
A	US 6419681 B1 (JAIME VARGAS ET AL), 16 July 2002 (16.07.02), figures 1-2,31-32	7–19
·		
	·	
	·	
•	·	

Box I	Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This inter	mational search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1.	Claims Nos.: 1-6 because they relate to subject matter not required to be searched by this Authority, namely:
	Methods for treatment of the human or animal body by surgery or therapy (PCT Rule 39.1(iv)).
2.	Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3.	Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II	Observations where unity of invention is lacking (Continuation of item 2 of first sheet)
This Inte	ernational Searching Authority found multiple inventions in this international application, as follows:
1.	As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.	As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.	As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4.	No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark	k on Protest  The additional search fees were accompanied by the applicant's protest.  No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT Information a sent family members

06/09/03

It lapplication No.
PC17NO 03/00258

Patent document cited in search report			Publication date	Patent family member(s)		Publication date
EP	0723766	A1	31/07/96	AU	2319295 A	16/11/95
				CA	2167425 A	27/07/96
				DE	69505246 D,T	17/06/99
				EP	0756731 A,B	05/02/97
				JP	8299451 A	19/11/96
				NL	9500147 A	02/09/96
				US	5741324 A	21/04/98
WO	0027311	A1	18/05/00	AU	1466300 A	29/05/00
no.	002,011		20, 00, 00	EP	1124506 A	22/08/01
				JP	2002529140 T	10/09/02
				US	6152937 A	28/11/00
				US	6508822 B	21/01/03
	•		<i>^</i>	้ บร	· 6599303 B	29/07/03
				US	6620176 B	16/09/03
WO	0134037	A1	17/05/01	AU <sup>1</sup>	1463701 A	06/06/01
NO.	025,057	7.2	2,,00,00	CA	2393799 A	17/05/01
				EP	1233704 A	28/08/02
				· JP	2003513696 T	15/04/03

# INTERNATIONAL SEARCH REPORT Information of the lent family members

06/09/03

In lapplication No.
PC1710 03/00258

	t document search report		Publication date		Patent family member(s)	Publication date
10	0170090	A2	27/09/01	· AU	3313600 A	09/10/00
.0		-	,	AU	4449601 A	03/10/01
				AU	4449701 A	03/10/01
				AU	7552500 A .	18/06/01
				AU	7552700 A	18/06/01
				BR	0016247 A	27/08/02
	•			CA	2393486 A	14/06/01
				CA	2393508 A	14/06/01
	• .			CA	2403289 A	27/09/01
				EP	1237485 A	11/09/02
	•			EP	1259169 A	27/11/02
				EP	1265535 A	18/12/02
				JP	2003515416 T	07/05/03
				WO	0141623 A	14/06/01
				WO	0141624 A	14/06/01
				WO	0170091 A	27/09/01
				ÄÜ	2877401 A	03/10/01
				AU	2877901 A	03/10/01
				AU	3313800 A	09/10/00
				BR	0009172 A	18/12/01
				BR	0109404 A	03/06/03
				CA	2366708 A	28/09/00
			·	CA	2403119 A	27/09/01
				CA	2403506 A	27/09/01
	•			EP	1171044 A	16/01/02
			•	EP	· 1265536 A	18/12/02
				EP	1289430 A	12/03/03
				IL	145431 D	00/00/00
				JP	2002538926 T	19/11/02
				NZ	514745 A	29/08/03
				WO	0247561 A	20/06/02
				UA	1423702 A	24/06/02
				AU	9584701 A	22/04/02
				CA	2425336 A	18/04/02
				CA	2431405 A	20/06/02
				IL	144051 D	00/00/00
			•	WO	0230172 A	18/04/02
				MO	0247532 A	20/06/02
			•	US	2003060876 A	27/03/03
				WO	0170118 A	27/09/01
FR	2737653	A1	14/02/97	DE	69626161 D	00/00/00
• • • •				EP	0759287 A,B	26/02/97
US	5366462	Α	22/11/94	AT	207723 T	15/11/01
				AU	4803593 A	28/02/95
				DE	69331066 D	00/00/00
				EP	0713373 A,B	29/05/96
				US	5234447 A	10/08/93
				US	5403333 A	04/04/95
				WO	9504503 A	16/02/95

# INTERNATIONAL ARCH REPORT Information on the family members

06/09/03

In application No.	
PCT/NO 03/00258	

Patent document cited in search report		Publication date	Patent family member(s)		· Publication date
US 641968	B	16/07/02	AU US WO AU AU DE DE US US WO	5143000 A 6537288 B 2002042622 A 0069364 A 5150500 A 5150600 A 5588200 A 10084618 T 10084620 T 6371964 B 6428550 B 2002077637 A 0069343 A 0069349 A	05/12/00 25/03/03 11/04/02 23/11/00 05/12/00 05/12/00 05/12/00 08/05/02 06/06/02 16/04/02 06/08/02 20/06/02 23/11/00 23/11/00